Open Access Article. Published on 14 March 2024. Downloaded on 1/15/2026 1:59:07 AM.
This article is licensed under a Creative Commons Attribution 3.0 Unported Licence.

Energy Advances

rsc.li/energy-advances

The Royal Society of Chemistry is the world's leading chemistry community. Through our high impact journals and publications we connect the world with the chemical sciences and invest the profits back into the chemistry community.

IN THIS ISSUE

ISSN 2753–1457 CODEN EANDBJ 3(3) 545–666 (2024)

Cover
See Fumiaki Amano *et al.*, pp. 558–563.
Image reproduced by permission of Fumiaki Amano from *Energy Adv.*, 2024, **3**, 558.

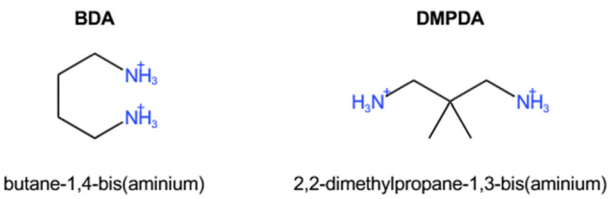
Inside cover
See Patrik Johansson, Faiz Ullah Shah *et al.*, pp. 564–573.
Image reproduced by permission of Yanqi Xu from *Energy Adv.*, 2024, **3**, 564.

COMMUNICATION

552

Enhancing perovskite solar cell efficiency and stability through the incorporation of $BDAI_2$ and $DMPDAI_2$

Han Wen Chang, Chien Cheng Li, Tzu Yu Haung, Hsin Chieh Li and Chih Shan Tan*

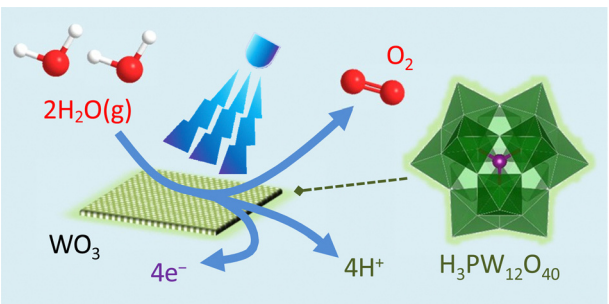


PAPERS

558

Gas-fed photoelectrochemical reactions sustained by phosphotungstic acid as an inorganic surface electrolyte

Fumiaki Amano,* Keisuke Tsushiro and Chiho Akamoto



View Article Online

ROYAL SOCIETY OF CHEMISTRY

NEW JOURNAL

RSC Sustainability

GOLD OPEN ACCESS

Dedicated to sustainable chemistry and new solutions

For an open, green and inclusive future

rsc.li/RSCSus

Fundamental questions
Elemental answers

Registered charity number: 207890

View Article Online. Published on 14 March 2024. Downloaded on 1/15/2026 1:59:07 AM.
This article is licensed under a Creative Commons Attribution 3.0 Unported Licence.

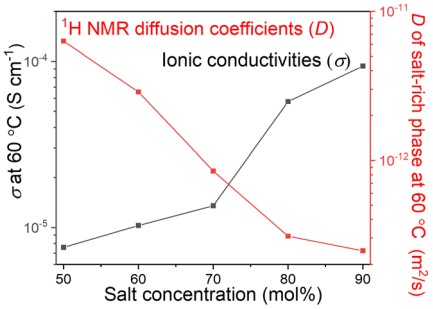
Open Access Article. Published on 14 March 2024. Downloaded on 1/15/2026 1:59:07 AM.
This article is licensed under a Creative Commons Attribution 3.0 Unported Licence.

PAPERS

564

Fluorine-free "solvent-in-salt" sodium battery electrolytes: solvation structure and dynamics

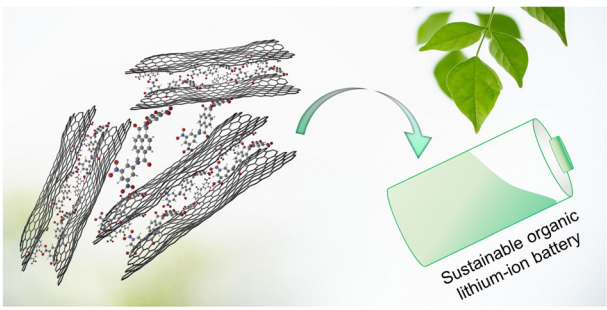
Yanqi Xu, Andrei Filippov, Sourav Bhowmick, Patrik Johansson* and Faiz Ullah Shah*



574

A redox acceptor–acceptor nitro functionalized naphthalene diimide/rGO anode for sustainable lithium-ion batteries

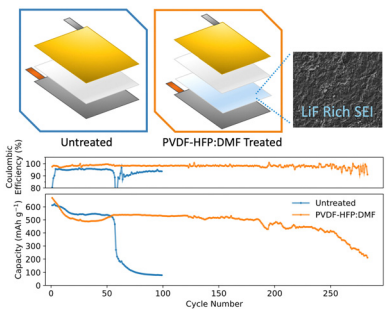
Madan R. Biradar, Nitish Kumar, Prakash Kumar Pathak, Sidhanath V. Bhosale,* Sheshanath V. Bhosale* and Rahul R. Salunkhe*



584

Solid–liquid–solid mediated artificial SEI coated stable lithium and high-sulfur percentage SPAN for high performance Li–S batteries

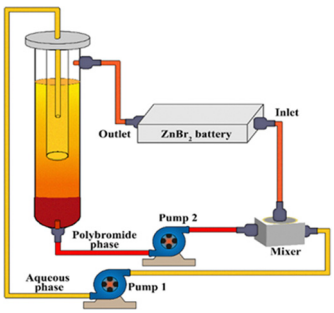
Krishna Sarode, Taber Yim, Rhyz Pereira, Neal Cardoza and Vibha Kalra*



592

Improved coulombic efficiency of single-flow, multiphase flow batteries *via* the use of strong-binding complexing agents

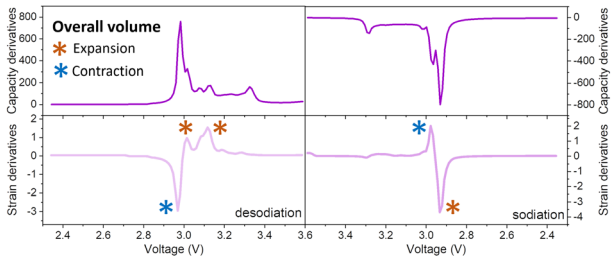
Prakash Rewatkar,* Mohamed Asarthen S, Robert Glouckhovski, Ran Elazari and Matthew E. Suss*



Open Access Article. Published on 14 March 2024. Downloaded on 1/15/2026 1:59:07 AM.
This article is licensed under a Creative Commons Attribution 3.0 Unported Licence.

PAPERS

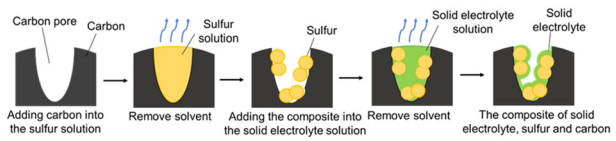
601



Probing electrochemical strain generation in sodium chromium oxide ($NaCrO_2$) cathode in Na-ion batteries during charge/discharge

Minal Wable, Batuhan Bal and Ömer Özgür Capraz*

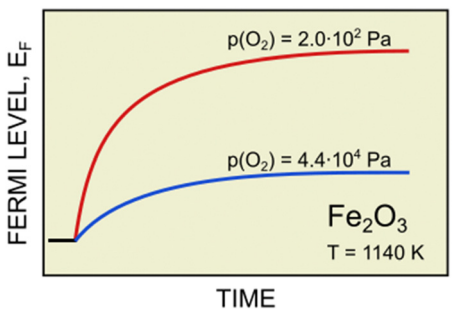
609



Preparation of carbon–sulphur composite electrodes by solution impregnation and application to all-solid-state lithium–sulphur batteries

Sakura Niwa, Yuta Fujii,* Nataly Carolina Rosero-Navarro, Akira Miura, Kiyoharu Tadanaga, Riku Maniwa, Misaki Fujimoto, Harumi Takada and Masahiro Morooka

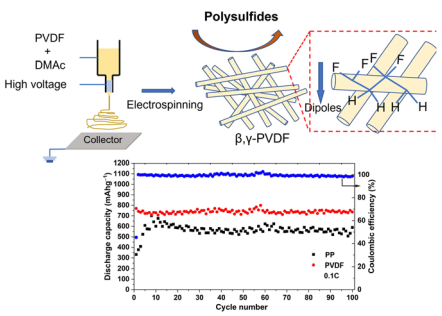
614



***In situ* surface monitoring of energy materials during processing: impact of defect disorder on surface *versus* bulk semiconducting properties of photocatalytic hematite (Fe_2O_3)**

T. Bak, D. StC. Black, P. Gannon, T. M. Gür, I. Jasiuk, S. A. Sherif, W. M. Sigmund and J. Nowotny*

625



Electrospun polar-nanofiber PVDF separator for lithium–sulfur batteries with enhanced charge storage capacity and cycling durability

Irshad Mohammad, Luke D J Barter, Vlad Stolojan, Carol Crean and Robert C T Slade*

This journal is © The Royal Society of Chemistry 2024

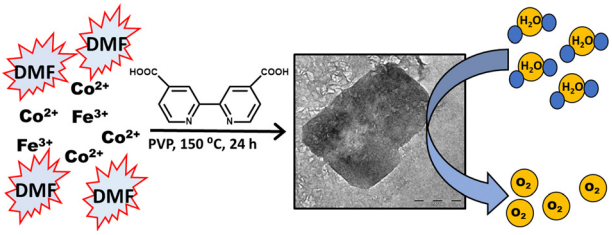
Open Access Article. Published on 14 March 2024. Downloaded on 1/15/2026 1:59:07 AM.
This article is licensed under a Creative Commons Attribution 3.0 Unported Licence.

PAPERS

636

A Co and Fe bimetallic MOF with enhanced electrocatalytic oxygen evolution performance: exploring the electronic environment modifications upon Fe incorporation

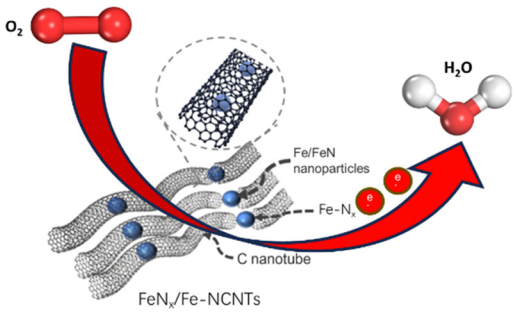
Varsha Singh, Devesh Kumar Singh, Mamta Yadav, Smita Singh, Vikram Rathour, Ananya Tiwari and Vellaichamy Ganesan*



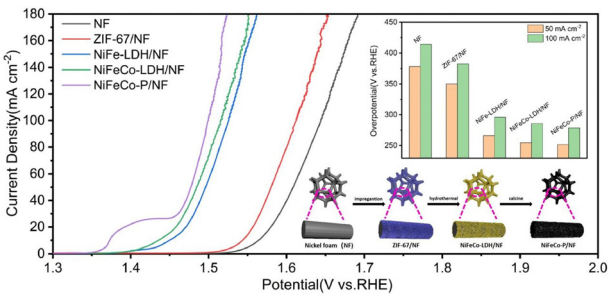
648

Prussian blue-derived FeN_x/Fe-based N-doped carbon nanotube catalysts with high ORR electrochemical performance

Zhenlu Zhao,* Qidi Lu and Xin Wang



654

An *in situ* formed ZIF-67 derived NiFeCo-P nano-array for accelerating the electrocatalytic oxygen evolution reaction

Xi Guo, Li Li,* Shuo Wang, Huan Zhang, Yuzhen Kuang, Guangbin Duan* and Bingqiang Cao